

ABSTRACT

The present invention describes a planetary differential including a differential case rotatable about an axis. The differential case includes a cover, a housing, an annulus gear, and a ring gear. The differential case defines a differential cavity having a clutch cavity and a planet cavity separated by a retainer plate coupled to the housing. The modular nature of this system allows both open and torque biasing constructions in the same packaging space.

The present invention is further directed to a method of manufacturing a planetary differential having a differential case with a cover and a housing, an annulus gear, and a ring gear. The differential case has a clutch cavity and axial opening defined by the housing and a planet cavity. The method includes the steps of coupling a retainer plate to the housing between the clutch cavity and the axial opening, placing a planetary gear set in the planetary cavity, and fixing the housing to the annulus gear and ring gear.